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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/089,292	08/28/2002	Hon Mun Ng	8737-000010	9370

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EXAMINER	
LI, BAO Q	

ART UNIT	PAPER NUMBER
1648	

DATE MAILED: 06/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action Before the Filing of an Appeal Brief	Application No. 10/089,292	Applicant(s) NG ET AL.	
	Examiner Bao Qun Li	Art Unit 1648	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 22 May 2006 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:
   a) ☒ The period for reply expires *6* months from the mailing date of the final rejection.
   b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

   Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☒ The Notice of Appeal was filed on *22 May 2006*. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
   (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
   (b) ☐ They raise the issue of new matter (see NOTE below);
   (c) ☒ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).
4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
   The status of the claim(s) is (or will be) as follows:
   Claim(s) allowed: _____.
   Claim(s) objected to: *54-57*.
   Claim(s) rejected: *34-37,45-49,54-57 and 64-66*.
   Claim(s) withdrawn from consideration: *38-44,50-53 and 58-63*.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: See attached detial advisory action.
12. ☒ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). May 22, 2006
13. ☒ Other: Interview Summary

Advisory Action

The response to the final action filed on May 22 under 37 CFR 1.116 has been entered. However, the amendment of the claims has been considered but is not deemed to place the application in condition for allowance and will not be entered for the reason set forth bellow in detail.

For purpose of appeal, the status of the claims is as follows:

Allowed claim(s): NONE.

Rejected claim (s): 34-37, 45-49, 54-57 and 64-66.

Claim(s) objected to: 54-57.

Claims withdrawn: 38-44, 50-53 and 58-63.

Sequence requirements

This application contains sequence disclosures in Table 9, and line 35 of page 51, and Figs. 1-5 that are encompassed by the definitions for nucleotide and/or amino acid sequences set forth in 37 CFR 1.821(a)(1) and (a)(2). However, this application fails to comply with the requirements of 37 CFR 1.821 through 1.825 for the reason(s) set forth on the attached Notice To Comply With Requirements For Patent Applications Containing Nucleotide Sequence And/Or Amino Acid Sequence Disclosures.

Full compliance with the sequence rules is required in response to this Office Action. A complete response to this office action should include both compliance with the sequence rules and a response to the Office Action set forth below. Failure to fully comply with **both** these requirements in the time period set forth in this office action will be held non-responsive.

Applicants are reminded that this sequence requirement has been sent to applicants along with the first office action on March 10, 2005. However, applicants still haven't comply with the sequence rule and fixed the sequence problems raised in the office action mailed on March 10, 2005. **Failure to fully comply with both these requirements in the time period set forth in this office action will be held non-responsive.**

Claim Objections

1. Claims 54-57 are still objected because the amendment has not been entered. The outstanding objection is maintained.

Claim Rejections - 35 USC § 102/103

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 34-37, 45, 47, 54-57 and 64-66 are still rejected under 35 U.S.C. 102(b) on the same ground as stated in the previous office action as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over by Reyes et al. (US Patent No. 5,686,239A).

5. In the response, that applicants assert that the amendment that directs the main claim 34 as an anti-HEV reactive pE2 homodimer and unique, new and non-obvious features. Moreover, the prior art by Reyes does not teach or suggests the features defined by claim 34. Thus, the rejection should be withdrawn. Applicants further assert that for the reason given with respect to claim 34, claims 35-37, 45, 54-57 and 64-65 would be patentable over Reyes's reference of "239A"

6. Applicants' argument has been fully considered; however, it is not found persuasive. First, the amendment has not been entered, and the rejection is still maintained.

7. Regarding to applicants' argument that Reyes's reference does not teaches and suggests claim 34 and its depended claims 35-37, 45, 54-57 and 64-65, applicants' attention is directed to the patent 239A, in that Reye teaches a specific ORF2 C-terminus truncated antigenic peptide, i.e. SG3 isolated from Burma (SG3B) and Mixico strain (SG3M) comprising 327 amino acids that have significant homology to the ORF2 of other HEV strains and they can react with the antisera of other HEV isolates (See example 6 on column 22). Reys et al. in patent "239A" therefore, teach an SG3 derived peptide, is the peptide selected from the group consisting of SEQ ID NO: 13, SEQ ID NO: 14, homologous sequence therewith, and fragments, **analogs, polymers** and **chimeras thereof** (See lines 60-68 of columns 2 and line 1-4 of column 3). More preferably, they teach that the peptide is selected from the SEQ ID NO: 13; SEQ ID NO: 14, the SEQ ID NO: 15, SEQ ID NO: 16, SEQ ID NO: 17 and SEQ ID NO: 18 and the internally consistent variants between sequence SEQ ID Nos: 13 and 14; between SEQ ID NOs: 15 and 16, and SEQ ID Nos: 17-18 (See columns 5-6).

8. Regarding to the internally consistent variants, they define "the internally consistent variants" as " in two or more known peptide sequences, which are more than about 70% homologous in amino acid sequence, the third amino acid sequence will be the "internally consistent with the known sequences" if each amino acid in the third sequence is identical to at least one of the amino acids in the known sequences.

9. Regarding to the fragment, polymer, analogs, and chimeric peptide, Reyes et al. in patent "239A" also teaches that it will be appreciated that other HEV peptide, e.g. fragment, polymer, analogs, and chimeric peptide containing selected portions, and preferably C-terminal portions can be produced by recombinant DNA technique, wherein the peptide fragment, polymer, analogs consists of the essential epitopic region (s) of the disclosed SG3 peptide in accordance with the invention, and are those that have shown substantially similar immunoreactive to HEV positive sera as does an SG3 peptide antigen (SEQ ID NO. 13 or 14). Immunoreactivity is substantially similar when the percentage of sera samples that are reactive with both SG3, and the peptide fragment, analog, chimera, or polymer is, preferably, greater than 80%, more preferably greater than 90%, and even more preferably greater than 95% (See column 7). Reyes et al. also claim a kit contains such antigen peptide that is an internally consistent variations between the 13 and SEQ ID NO: 14, wherein the kit also contains other diagnosis reagent, such

as positive sera standard, solid support, 96 well plate, detection agents etc (See claims 5-12 and examples 4-6, columns 15-17).

10. To this contains, the claimed peptide E2 is anticipated by the disclosure of Reyes' s reference of "239A" or alternatively, it would have been obvious for any person with ordinary skill in the art to make such obvious mutation over the disclosure of Reyes's references "239A" since Reyes et al. teach and suggest this many obvious analog of ORF2 peptide possesses would exhibit a very similar immunological activity to the disclosed SG3, especially in the instant case, the peptide E2 that exhibits more than 90 % overall homology to the peptide SG3 (B) and SG3(M) is just belonged to one of the internally consistent variants, which also exhibits a very similar biological activity as SG3 peptide disclosed by Reyes et al. in patent "239A" absence unexpected result.

11. To this context, the rejection is maintained.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 34-37, 45, and 47-49 are still rejected under 35 U.S.C. 102(b) on the same ground as stated in the previous Office Action, as being anticipated by Reyes et al. (B) (US patent No. 5,741, 490A) or Reyes et al. (C) (US Patent NO. 5,770,689).

14. In the response, that applicants assert that the amendment, therefore, the rejection should be withdrawn.

15. Because the amendment has not been entered, the rejection is still maintained for the same reason stated in the previous office action.

16. Moreover, applicants also reminded that peptide disclosed by the patent "689A" and "490A" that Ryes et al. teach that the peptide in the disclosed vaccine composition for immunizing an individual against hepatitis E virus (HEV) preferably include the amino acid sequence identified by one of the following sequences: SEQ ID NO: 13, SEQ ID NO: 14, the

internally consistent variations between SEQ ID NO: 13 and SEQ ID NO: 14, SEQ ID NO: 15 and SEQ ID NO: 16 and internally consistent variations between SEQ ID NO: 15 and SEQ OID NO: 16 etc. (See column 2 of both patents). Regarding to the internally consistent variations, both patents define it as a sequence with more than about 70% homologous in amino acid sequence between the SEQ ID NO: 13 and SEQ ID NO: 14 (See column 4 of both patent).

17. Therefore, the rejection is maintained.

18. Claims 34, 37, 64 are still rejected under 35 U.S.C. 102(b) on the same ground as stated in the previous office action as being anticipated by Khudyakov et al. (Virol. 1994, pp. 390-393).

19. In response to the previous office action, Applicants substitute old claim 1 with new claim 34 by adding one limitation of the isolated peptide consisting of pE2 homodimers and immunological reaction to the pE2 homodimers. Therefore, the cited reference does not teach or obvious to the unique characteristic of the isolated pE2 as SEQ ID NO: 2 homodimers. However, the broad scope of claim still read on some derivatives thereof having extension, substitution, insertion and/or deletion of the amino acid sequence of SEQ ID NO: 2. Therefore, the claimed invention is rejected by the cited reference because the peptide disclosed by Reyes et al. are considered as a derivatives of the SEQ ID NO: 2 as claim 34 and its dependent claims drafted. The rejection is maintained.

Claim Rejections - 35 USC § 102

20. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

21. Claims 34-37, 45-49, 54-57 and 64-66 are still rejected under 35 U.S.C. 102(e) on the same ground as stated in the previous Office action as being anticipated by Li et al. (US Patent No. 6,514,690B1).

22. In the response, that applicants assert that the amendment, therefore, the rejection should be withdrawn.

23. Because the amendment has not been entered, the rejection is still maintained for the same reason stated in the previous office action.

Claim Rejections - 35 USC § 102

24. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

25. Claims 34-37, 45-49, 54-57 and 64-66 are still rejected under 35 U.S.C. 102(e) on the same ground as stated in the previous Office action as being anticipated by Li et al. (US Patent No. 6,514,690B1).

26. In the response, that applicants assert that the amendment, therefore, the rejection should be withdrawn.

27. Because the amendment has not been entered, the rejection is still maintained for the same reason stated in the previous office action.

Regarding to claim 66, Applicants are reminded that claim 66 was rejected in the previous office action because claim 66 comprising the pE2 homology, fragment, analog thereof, which is anticipated by the disclosure of cited prior art in the previous office action.

Conclusion

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bao Qun Li whose telephone number is 571-272-0904. The examiner can normally be reached on 6:30 am to 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bruce Campell can be reached on 571-272-0974. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BAOQUN LI, MD
PATENT EXAMINER

Bao Qun Li